UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,314	11/04/1999	PETER J. BLACK	PA000045	3810

23696 7590 04/19/2005

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER	
LEE, JOHN J	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/434,314	BLACK, PETER J.	
	Examiner	Art Unit	
	JOHN J LEE	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *40-96* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *40,41,49,50,59,60,69,70 and 76-96* is/are rejected.

7)☒ Claim(s) *42-48,51-58,61-68, and 71-75* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments received on November 3, 2004 have been carefully considered but they are not persuasive because the teaching of all the cited references reads on all the rejected claims as set forth in the pervious rejection. Therefore, the finality of this Office Action is deemed proper.

Contrary to the assertions at pages 13 - 15 of the Arguments, claims 40, 49, 59, 69, 76, 80, 83, 84, 87, 88, 89, 90, 94, and 96 are not patentable.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the decision to handoff forward link communications to the first base station is based on the average quality of reverse link signal between the first base station and the subscriber station, the quality of reverse link, from which the handoff decision is made, is measured by reverse link power control commands

from the first base station, and the reverse link power quality is measured by reverse link rate requests from first base station) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the combination of Kondo (US Patent number 6,526,028) and Kondo (US Patent number 6,580,745) do not teach the claimed invention "selectively performing a handoff to the first base station based, on whether signals transmitted by the subscriber station are received by the first base station with sufficient energy according to the reverse link power control commands received from the first base station". However, The Examiner respectfully disagrees with Applicant's assertion that the Kondo (028) and Kondo (745) do not teach the claimed invention. Contrary to Applicant's assertion, the Examiner is of the opinion that Kondo (028) teaches for performing soft handoff, mobile station received TPC (transmission power control information signal) from the base station and measuring the quality of reverse link TPC signal by mobile station. If the mobile station does not receive the TPC signal, inherently cannot handoff to the base station (see Fig. 10, 15 and column 30, lines 23 – column 31, lines 20), regarding the claimed limitation. More Specifically, Kondo (745) also teaches mobile station receives the reverse link power control command from the base station and indicating increase/decrease transmission power of the mobile station, when the measured ratio of increase commands is not less than a predetermined ratio, determining that a reverse link interference amount between base station and mobile station is not less than an

allowable value, reducing the reverse link interference amount between the communications by performing at least one of transmission output restriction and origination/termination restriction for performing handoff, and also, when measured ratio of receiving transmission power control commands signal is less than a predetermined ratio or cannot receiving the power commands signal, the handoff operation is terminated to the base station (see column 6, lines 30 – column 7, lines 52 and Fig. 4, 5), it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Kondo (028) system as taught by Kondo (745), provide the motivation to achieve more reliable handoff performing in mobile communication system.

Applicant also argues that the claimed limitation "a memory stores message indicating the average quality of reverse link signal received by the one or more station" does not teach by Kondo (028). However, The Examiner respectfully disagrees with Applicant's assertion. Contrary to Applicant's assertion, the Examiner is of the opinion that Kondo (028) teaches mobile station stores received reverse link signal quality from base stations such that first, second, and third base station and calculates each reverse link signal quality/level and measures differences by calculating the average reverse link signal level (see column 28, lines 7 – column 29, lines 47 and Fig. 7, 10), regarding the claimed limitation.

Applicant's attention is directed to the rejection below for the reasons as to why this limitation is not patentable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 40, 41, 49, 50, 59, 60, 69, 70, and 76-96** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo (US Patent number 6,526,028) in view of Kondo (US Patent number 6,580,745).

Regarding **claims 40, 49, 59, and 69**, Kondo (028) discloses that a method for performing handoff in a communication system (Fig. 7 and abstract). Kondo (028) teaches that receiving, by a subscriber station (10 in Fig. 7), pilot signals and reverse link power control commands from one or more base stations (20s in Fig. 7) (Fig. 15 and column 30, lines 38 – 50 where teaches base stations transmit a reverse transmission power control information signal and pilot information signal). Kondo (028) teaches that selecting a first base station (20 in Fig. 7), for transmission of forward link data to the subscriber station (10 in Fig. 7) based, at least in part, on energy of the pilot signals received from the one or more base stations (Fig. 7 and column 28, lines 7 –52 where teaches mobile station determines, as a particular base station, one of the first through the third base stations based on quality level, power reception level). Kondo (028) also teaches that selectively performing a handoff to the first base station based, at least in part, on whether signals transmitted by the subscriber station are received by the first base station with sufficient energy according to the transmission power

information signal and base station information signal received from the first base station (column 30, lines 38 – column 31, lines 48, Fig. 9, 16, and column 8, lines 13 – 43, where teaches the base stations transmit power control information and pilot information to mobile station and mobile station determines a base station based on forward link power and transmits the information, reverse link fading information, to the base station. When base station determines whether or not any propagation error based on the reverse link fading information on the basis of the detected result, the base station transmits the forward transmission signal to the mobile station for performing handoff).

Furthermore, the claimed limitation "one or more base stations" can be interpreted only one base station, which is currently communicating with the mobile station, transmits power control commands and pilot signal to the mobile station as known art and the mobile station does not need handoff because of communicating one base station.

However, Kondo (028) does not specifically teaches the limitation "selectively performing a handoff to the first base station based on whether signals transmitted by the subscriber station are received by the first base station with sufficient energy according to the reverse link power control commands received from the first base station". However, Kondo (745) teaches the limitation "selectively performing a handoff to the first base station based on whether signals transmitted by the subscriber station are received by the first base station with sufficient energy according to the reverse link power control commands received from the first base station" (Fig. 4, 8, 9, column 7, lines 9 – 52, and

column 3, lines 4 – 23, where teaches base station transmits the instruction to the reverse link transmission power control bits for determining reverse link interference and if the interference amount is less than allowable value, performs handover to the base station). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Kondo (028) system as taught by Kondo (745), provide the motivation to achieve more reliable handoff performing in mobile communication system.

Regarding **claims 41, 50, 60, and 70**, Kondo (028) discloses that storing information corresponding to the reverse link power control commands received from the one or more base stations (Fig. 8 and column 28, lines 7 – 52).

Regarding **claim 76**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 49.

Regarding **claim 77**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69.

Regarding **claim 78**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69. Furthermore, Kondo (028) discloses that transmitting, by the subscriber station, a message indicating the identity of said selected base station (column 23, lines 24 – 33 and Fig. 7, 15).

Regarding **claim 79**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69.

Regarding **claims 80 and 83**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 41. Furthermore, Kondo (028) further discloses that a processor (107 in Fig. 8), coupled with the memory (115 in Fig.

8), configured to permit a handoff to a selected base station of the one or more base stations according to the reverse link power control commands (Fig. 8 and column 28 – 7 – 52).

Regarding **claims 81 and 85**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69. Furthermore, Kondo (028) further discloses that the reverse link power control commands requesting the subscriber station to decrease its transmission energy are indicative that the reverse link signal being received (column 26, lines 46 – 67 and Fig. 15).

Regarding **claims 82 and 86**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69. Furthermore, Kondo (028) further discloses that the reverse link power control commands requesting the subscriber station to increase its transmission energy are indicative that the reverse link signal is not being received (column 26, lines 46 – 67 and Fig. 15).

Regarding **claim 84**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69. Furthermore, Kondo (028) further discloses that a plurality of base stations, each base station configured to receive the signal and transmit reverse link power control commands (Fig. 15 and column 30, lines 38 – column 31, lines 48).

Regarding **claim 87**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69.

Regarding **claim 88**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 80. Furthermore, Kondo (028) further discloses that a memory configured to store messages, provided by one or more

base stations, indicating a rate request of reverse link transmissions by the apparatus (column 26, lines 46 – 53 and Fig. 7, 15, where teaches prediction is made that a transmission rate where a large capacity of data is transmitted from a data base at a network side the mobile station is large).

Regarding **claim 89**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 80 and 88.

Regarding **claims 90 and 94**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69.

Regarding **claims 91 and 95**, Kondo (028) discloses that receiving from the first base station a message indicating a quality of the received reverse link signal (Fig. 8 and column 28, lines 35 – 52).

Regarding **claim 92** Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 69. Furthermore, Kondo (028) further discloses that the received reverse link signal is a data request control signal (column 32, lines 34 – 45 and Fig. 20).

Regarding **claim 93**, Kondo (028) discloses that determining the first base station was not selected for transmission of a last frame of data (Fig. 8 and column 28, lines 30 – 52).

Regarding **claim 96**, Kondo (028) and Kondo (745) disclose all the limitation, as discussed in claims 40 and 76.

Allowable Subject Matter

4. Claims 42-48, 51-58, 61-68, and 71-75 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose "determining whether it is necessary to perform the handoff to the first base station, and if it is necessary to perform the handoff, determining whether the signals transmitted by the subscriber station are received by the first base station with sufficient energy based, at least in part, on history of the reverse link power control commands received from the first base station" as specified in the claims.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay Aung Maung**, can be reached on **(571) 272-7882**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L
April 12, 2005

John J Lee

NAY MAUNG
SUPERVISORY PATENT EXAMINER